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Energy Dissipative Device and Method

Abstract

An energy dissipative element protects hard disk drives from shocks and vibrations. A closed elastic envelope houses a body of open cell foam, a volume of viscous liquid, and a compressible gas. Under compression or expansion of the foam, viscous liquid flows through cell orifices and thereby dissipates energy resulting from external force applied against the elastic wall. The energy dissipative elements are applied between a disk drive housing and an outer case to create a ruggedized portable disk drive module.